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REMARKS

Claims 1-4 and 6-18 remain pending.

In the Office Action, the Examiner rejected claims 1-18 under 35 U.S.C. § 102(b) as being anticipated by Liu et al. (U.S. Patent No. 6,618,387).

Applicants respectfully traverse the § 102(b) rejection of claims 1-4 and 6-14 over Liu et al. Claim 1 as amended requires a method including, *inter alia*, "wherein the cable modem functions are performed in a firmware emulator that emulates cable modem firmware that performs the cable modem functions." Claim 7 as amended requires a processor including, *inter alia*, "a firmware emulator that emulates cable modem firmware that performs the modem function." Liu et al. fails to disclose all elements of the method and processor of claims 1 and 7.

The rejection of canceled claim 5 (the subject matter of which has been incorporated into claim 1) on page 4 of the Office Action points to Cable Modem Driver (CMD) 80 of Liu et al., in its entirety, as allegedly disclosing the claimed firmware emulator. The rejection of claim 7 on page 5 of the Office Action additionally notes that CMD 80 includes Hardware Abstraction Layer (HAL) 60.

There is no disclosure in Liu et al., however, that teaches that CMD 80 or HAL 60 "emulates cable modem firmware that performs the [cable] modem function[s]." There is a complete absence in Liu et al. of any teaching regarding emulating cable modem firmware. The Examiner has failed to show any such disclosure in Liu et al.

To the contrary, Liu et al. discloses in Fig. 5 a separate, and presumably complete, cable modem 30 located in host 85. Liu et al. discloses at col. 8, lines 43-45, that:

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cable modems are currently stand-alone devices and include the hardware and software necessary to receive and transmit data over a cable network.

(emphasis added). Thus, cable modem 30 includes the necessary firmware for its operation.

This conclusion is further reinforced by col. 8, lines 43-45, of Liu et al. which discloses in relevant part:

HAL 60 establishes a connection between MAC layer 50 and physical layer 70 and permits any host to operate with any cable modem, so long as the cable modem and associated software are compatible with hardware abstraction layer 60.

(emphasis added). Thus, HAL 60 merely abstracts the commands and data to/from cable modem 30, but it does *not* "emulate cable modem firmware" as set forth in claims 1 and 7. Rather, cable modem 30 of Liu et al. includes its associated firmware. Because Liu et al. fails to disclose, either expressly or inherently, at least the above-quoted elements of independent claims 1 and 7, the § 102(b) rejection thereof is improper and should be withdrawn.

Claims 2-4, 6, and 8-14 are allowable at least by virtue of their respective dependence from claims 1 and 7.

Applicants respectfully traverse the § 102(b) rejection of claims 15-18 over Liu et al. Claim 15 as amended requires a method including, *inter alia*, "distributing the modem commands and/or data among a plurality of state machines that perform respective state machine functions; and processing the state machine functions by the plurality of state machines on a host computer." Liu et al. fails to disclose all elements of the method of claim 15.

The rejection of independent claim 15 on page 6 of the Office Action points to, among other places, col. 10, lines 53-65 of Liu et al., as allegedly disclosing the claimed state machine

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functions. While this portion of Liu et al. does appear to disclose that HAL 60 performs the three functions of "initializing and controlling cable modem 30," "handling user data packets," and "handling messages or data packets," it fails to disclose that HAL 60 includes state machines. There is no disclosure anywhere in Liu et al. of state machines. Nor is there any disclosure in Liu et al. that a plurality of state machines "perform respective state machine functions" as set forth in claim 15.

Because Liu et al. fails to disclose, either expressly or inherently, at least the above-quoted elements of independent claim 15, the § 102(b) rejection thereof is improper and should be withdrawn. Claims 16-18 are allowable at least by virtue of their dependence from claim 15.

Further regarding claims 10 and 11, Liu et al. also fails to disclose the additional elements therein. Claims 10 and 11 both require a processor including, *inter alia*, "wherein the firmware emulator includes a plurality of state machines and states within the state machines." Claims 10 and 11 are allowable over Liu et al. for at least the reasons given above with regard to claim 15. Liu et al., in addition to failing to disclose the claimed firmware emulator, also fails to disclose that such includes a plurality of state machines. Claims 10 and 11 are allowable for at least this additional reason.

Reconsideration and allowance of pending claims 1-4 and 6-18 is respectfully requested.

In the event that any outstanding matters remain in this application, Applicants request that the Examiner contact Alan Pedersen-Giles, attorney for Applicants, at the number below to discuss such matters.

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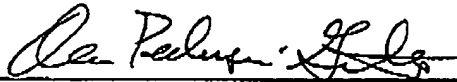
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To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 50-0221 and please credit any excess fees to such deposit account.

Respectfully submitted,

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